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ABSTRACT

This booklet contains a functional system for the development of the vocational education curriculum. It is intended as a quick reference when a brief curriculum overview is needed by those interested in vocational education, such as congressional aides, the National Council of Vocational Education, the U.S. Department of Education, and the American Vocational Association. It is also designed for use by vocational educators involved in developing curriculum and instructional materials to prepare students for an occupation. The booklet describes each of the seven steps to curriculum development: (1) precurriculum study; (2) job study; (3) design curriculum; (4) develop materials; (5) field test; (6) implement; and (7) follow-up evaluation. The document lists names, addresses, and telephone numbers of the members of the National Network for Curriculum Coordination in Vocational and Technical Education. (YLB)

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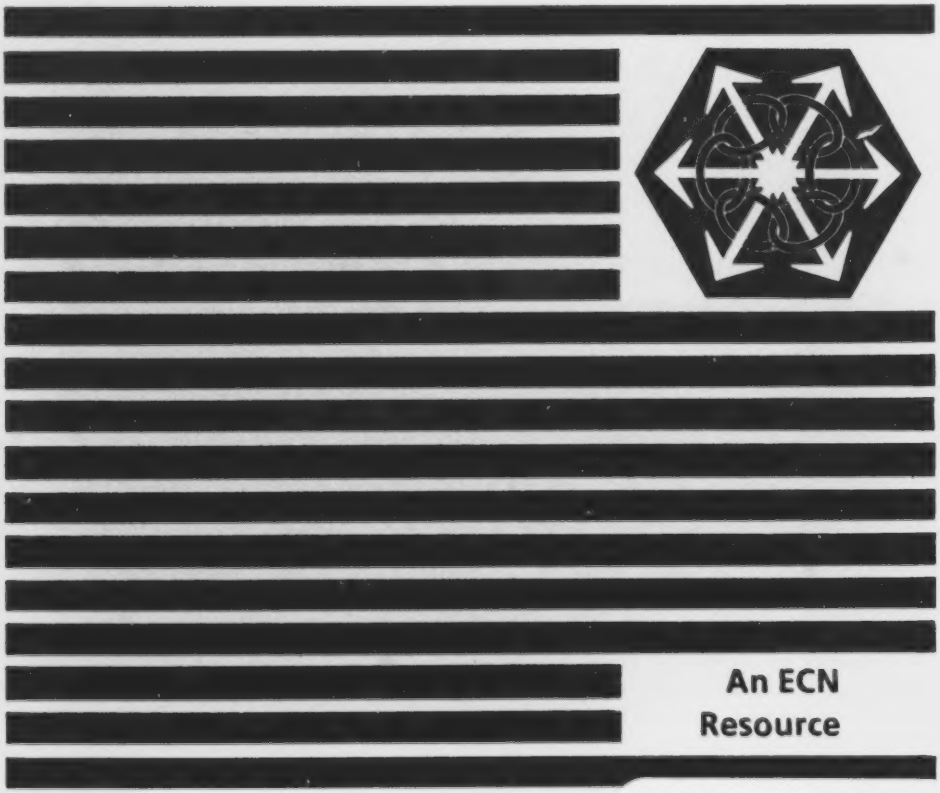

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A System for Curriculum Development

East Central Network for Curriculum Coordination

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National Network for Curriculum Coordination in Vocational and Technical Education, NNCCVTE

June, 1989

Preface

The East Central Network is one of six regions in the National Network for Curriculum Coordination in Vocational and Technical Education (NNCCVTE). The network serves the vocational education community through the sharing of curriculum and curriculum-related information.

Each of the six regions has a Curriculum Coordination Center, a director, and a State Liaison Representative (SLR) in each state or outlying area of the region. Their names and addresses begin on page 17.

The East Central Network State Liaison Representatives and staff of the East Central Curriculum Coordination Center are continually involved with the identification of resources needed by vocational educators. This document is intended to be a quick reference for use in developing vocational education curriculum.

We wish to express our appreciation to the ECN Curriculum Development Committee: Peggy Pool, Illinois, chairperson; Rachel Williams, Delaware; Ted Glenn, District of Columbia; Joyce Keefer Leimbach, Ohio; and Lou Chinnaswamy, Wisconsin. Their concern, dedication and expertise made this document a reality. Printing was accomplished through the Illinois Vocational Curriculum Center.

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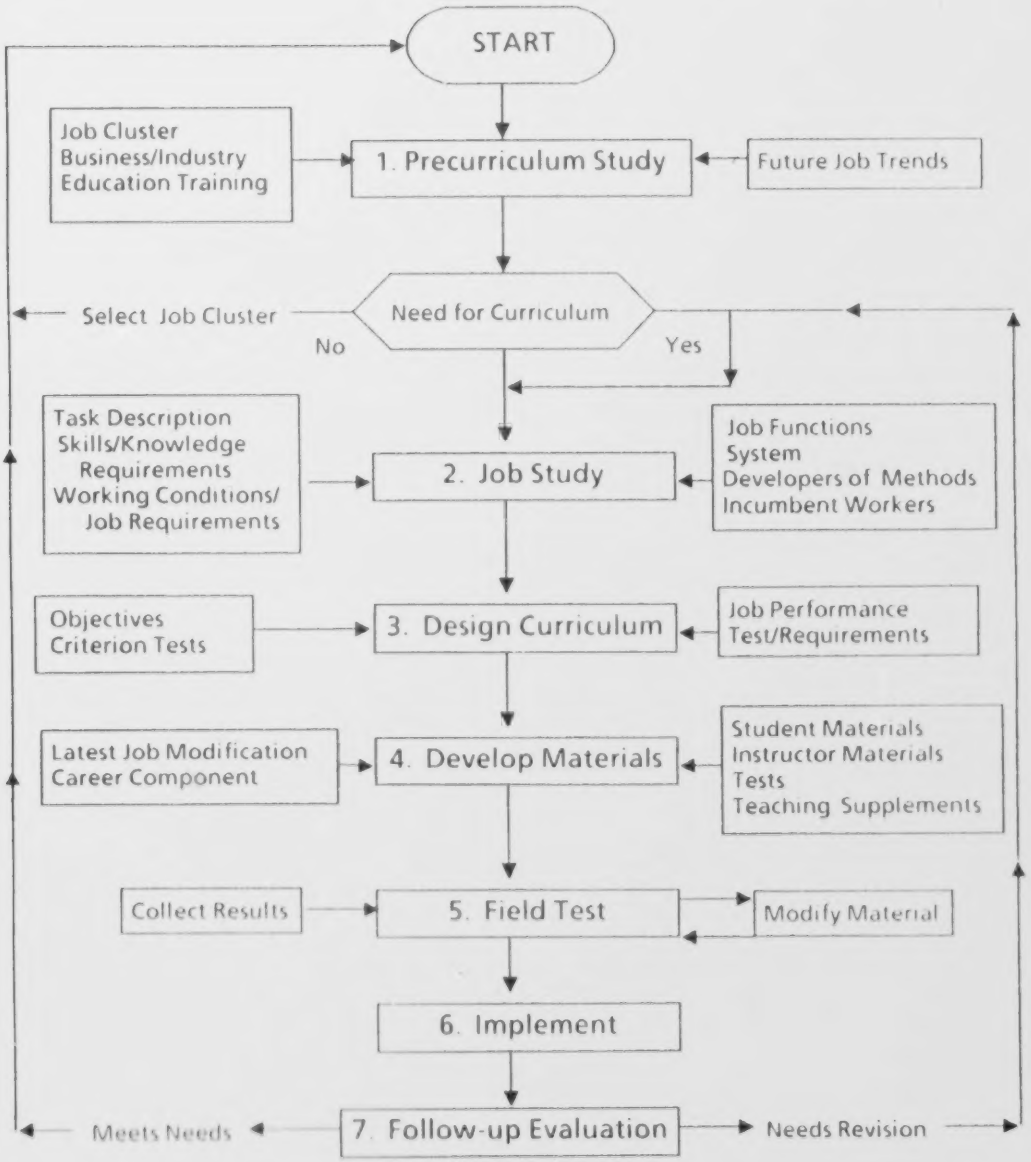
Rebecca S. Douglass, ECN Director
Ruth Volz Patton, ECN Coordinator
Marianne Lawrence, Editorial Writer

East Central Network for Curriculum Coordination
Sangamon State University, F-2
Springfield, IL 62704-9243

Curriculum Development System



Introduction

This booklet contains a functional system for the development of vocational education curriculum. The system will be helpful as a quick reference when a brief curriculum overview is needed by those interested in vocational education, such as congressional aides, National Council of Vocational Education, U.S. Department of Education and American Vocational Association. It is also intended for use by vocational educators involved in developing curriculum and instructional materials to prepare students for an occupation.

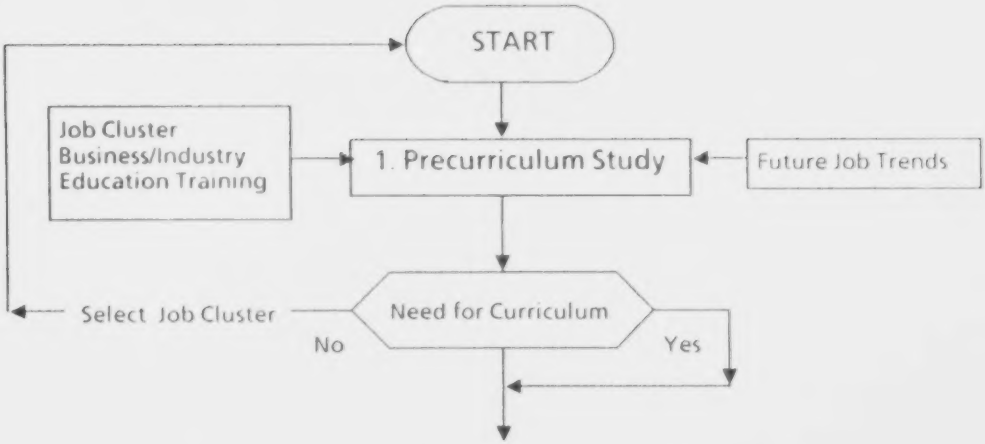
The system includes seven "steps" to curriculum development. The development process begins with an analysis of the need for a specific curriculum and ends with an evaluation of the curriculum's effectiveness.

The steps resulted from a consensus of the East Central Network (ECN) State Liaison Representatives (SLRs) Committee and the curriculum development system used in their respective states.

This approach is designed to be **flexible** with consideration of the needs of students with individual differences or special characteristics. It allows for consideration of socio-economic factors, job trends, and business/industry needs.

This illustrated system will need modifications due to differences among states and agencies. The process represents what all vocational education and training institutes are striving to implement in order to prepare the individual for employment.

Curriculum Development System



The need to create new vocational education curriculum or modify existing curriculum may surface due to student or instructor requests, business/industry suggestions or evaluation results by the educational institute.

Regardless, it is appropriate to determine curriculum need and decide on the best developmental approach. The purpose of the precurriculum study is to make this determination.

Data collection and analysis are the core of the precurriculum study. The study requires an initial selection of a cluster of jobs or an occupation. Analysis of the job cluster data identifies interrelated skills, and both vertical and horizontal relationships among the different levels of the job cluster.

Business and industry input is used to focus on the potential need for workers, type of training and education needed to make the individual more employable, and the expectations of the hiring establishment. In addition, on-the-job-training by business/industry is identified allowing for an improved overall training program provided by the educational institute and business/industry establishment.

Duplication of program offerings is minimized by analyzing data on education/training program offerings by educational institutes in the same geographic area. Findings promote strengthening some programs and deleting others in order to better prepare the learner.

Job trends are used to determine curriculum needs and provide justification for considering, creating, modifying or deleting curriculum.

Step 1 ends with a recommendation either to develop or not develop curriculum. When curriculum development is recommended, the effort moves to Step 2.

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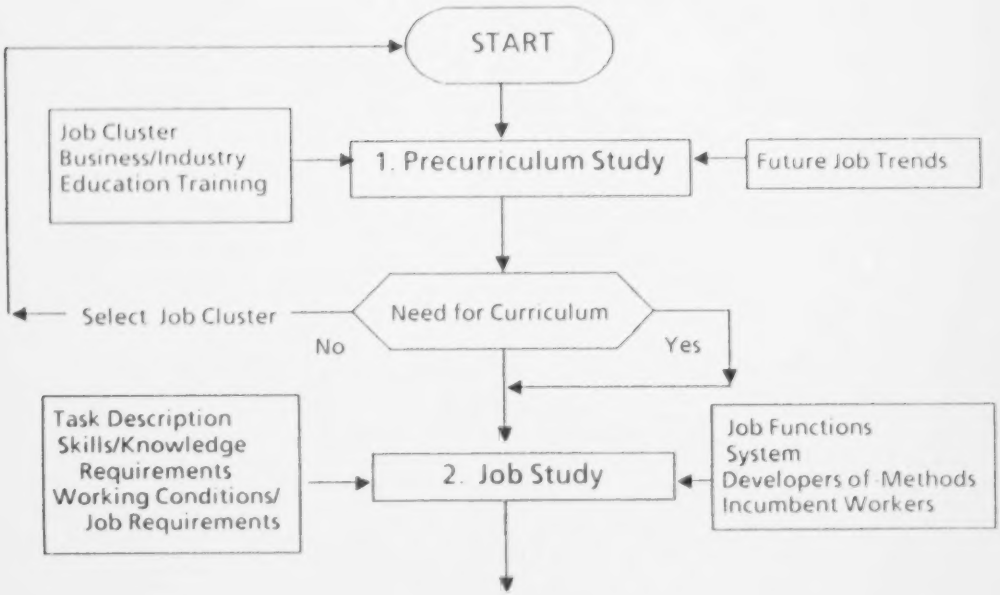

For education/training to be on target, the curriculum must match the on-the-job-training requirements. If there is a mismatch, the individual may not be adequately trained for the job.

The documentation produced from the Job Study becomes the basis for all further curriculum work.

For the Job Study to serve as an adequate basis for curriculum development, it is necessary to collect and analyze data leading to a complete description of job performances under study.

Major sources for such data include the following: documentation that provides information about how the job functions are carried out, the overall system utilized in the area where the job is performed; developers of the methods used for carrying out the job functions; incumbent workers and supervisors of workers performing the job activities; and state employment bureaus/data.

The job study should contain a detailed description of tasks; the required skills and knowledge needed for the job; and the working requirements, conditions and environment.

When the incumbent workers and supervisors, the working conditions and job requirements are represented in the Job Study, the data form a sound basis for the curriculum to be developed.

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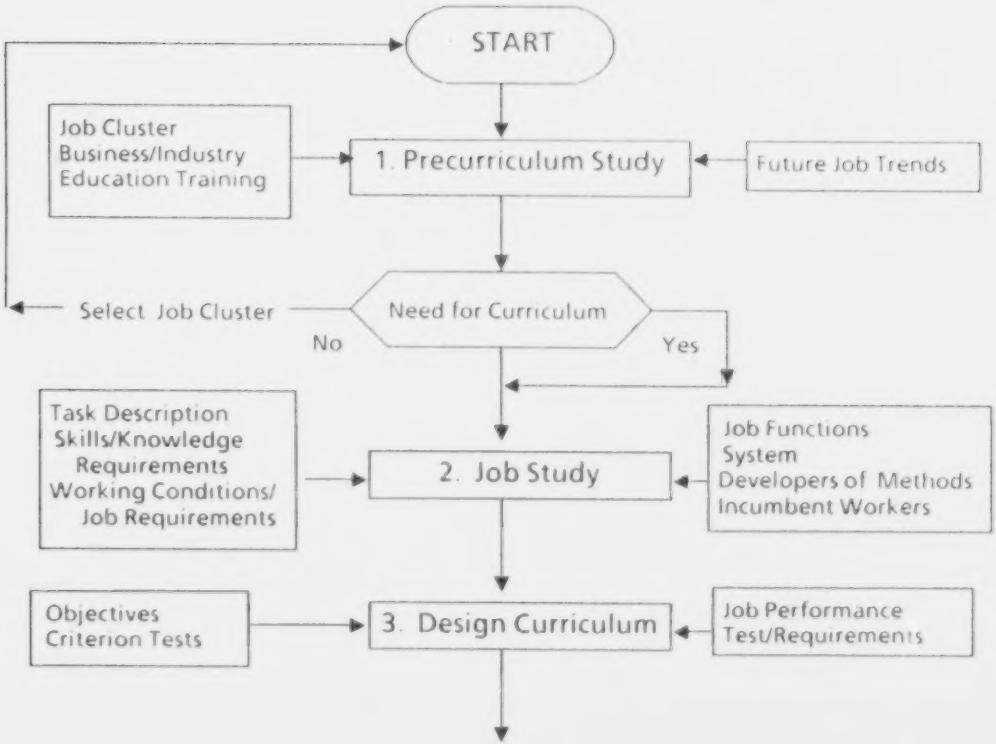


Step 3 Design Curriculum

The process of curriculum design uses the results of the Job Study in Step 2. The design provides the best means for individuals to learn the required skills and knowledge and to have a better concept of the particular working environment.

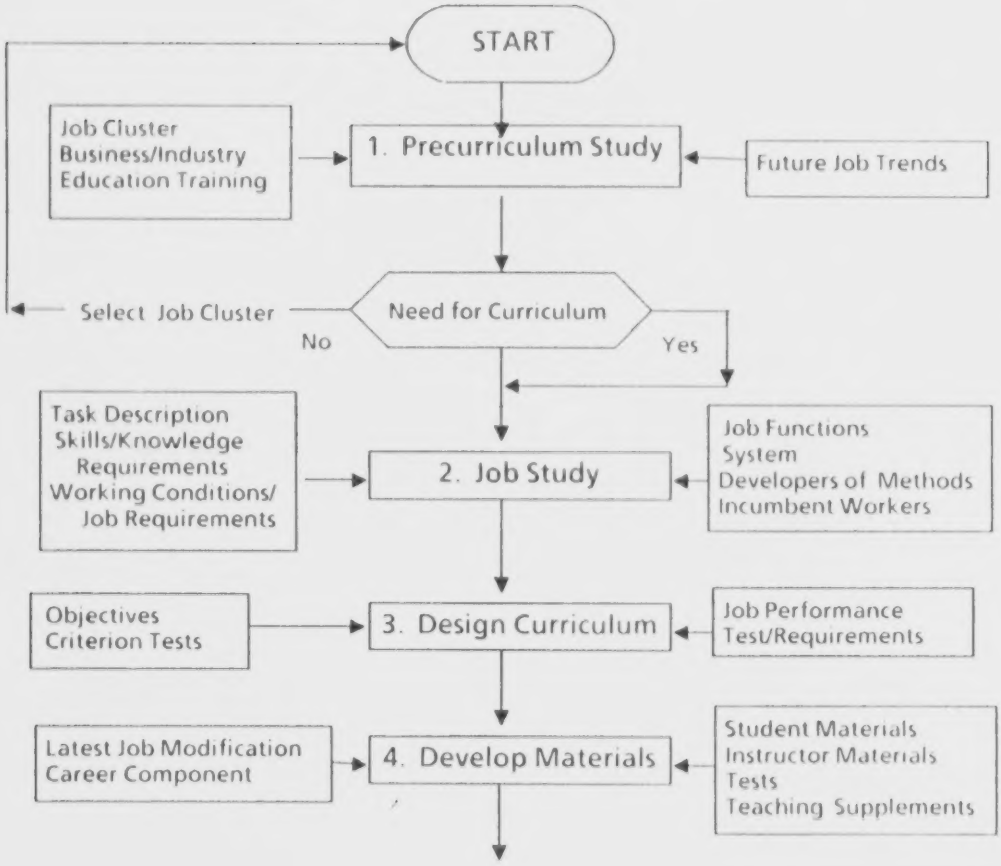
The curriculum design is like a blueprint used for constructing a building. Using the design as specifications, education and training are developed.

Step 3 is applied to existing programs that need to be revised, to new programs that need to be developed, or a combination of these.

The design process identifies limitations so that they can be dealt with appropriately. The objectives serve as a focus for further work on the curriculum design. Requirements, both job and educational institute, are recognized in the design. Tests -- criterion and performance -- are developed to judge the effectiveness of the program.

The curriculum design establishes the parameters for developing the materials in Step 4. Thus the design determines how the education and training will be presented.

Curriculum Development System



The purpose of Step 4 is to develop materials which present information to individuals in a way that the requirements or measurable objectives are learned.

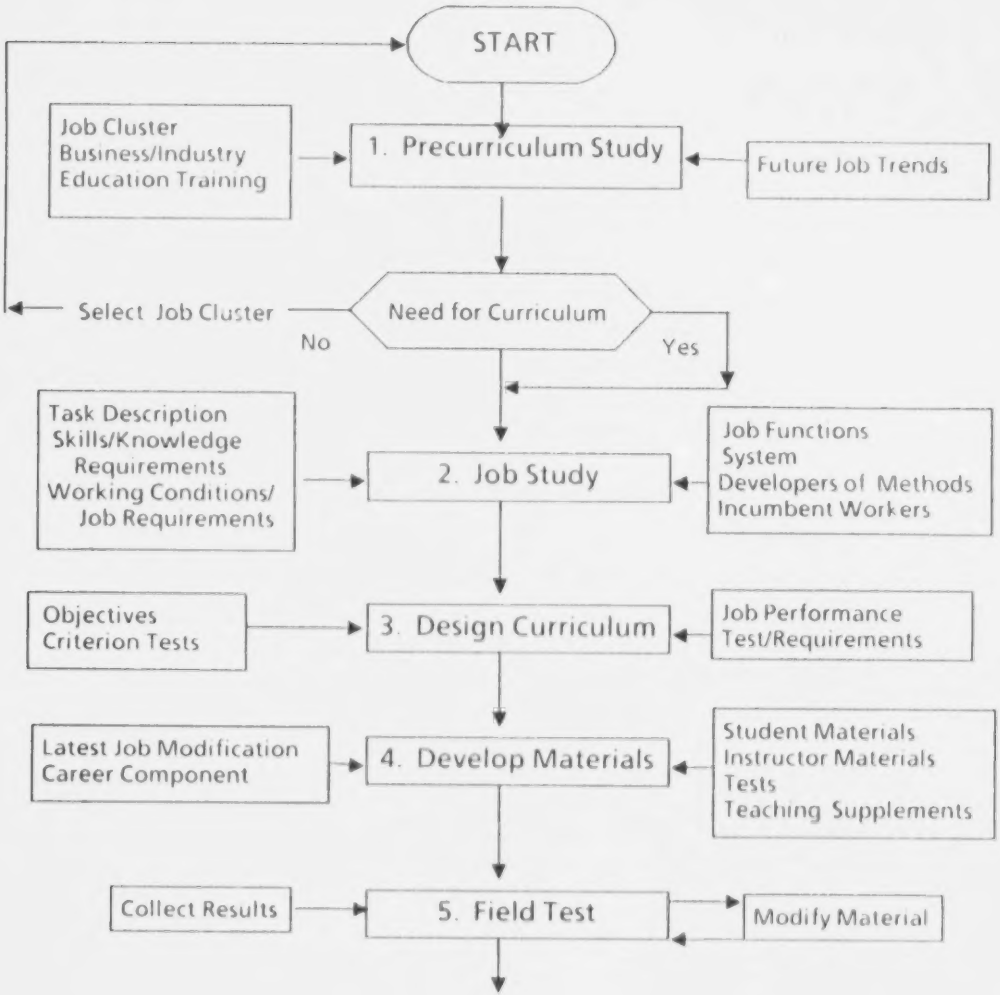
By depending on the curriculum design of Step 3, the developer is able to concentrate on the best methods for presenting content. More attention can be given to meet the specific needs of the individual learner such as reading level, safety concepts, individual learning style, and the necessary visual and teaching supplements.

The activities in Step 4 enable the developer to incorporate the latest job modifications so that the education and training are as up-to-date as possible. The career component allows the individual to be better informed about types of jobs in a job cluster, job advancement/promotion, and requirements for advancement. This information is vital for matching the individual with the job and therefore with the education/training program.

As materials are developed they are used with small groups of learners. The materials are repeatedly tried out and modified, as time permits. Again, reference is made to the objectives identified in Step 3, as they serve as a guide for revisions.

Within the confines of the curriculum design and guidelines, the developer still has considerable latitude as to content and format for the learning materials in the curriculum packet. Format should vary to conform with the requirements as established by the objectives.

Curriculum Development System



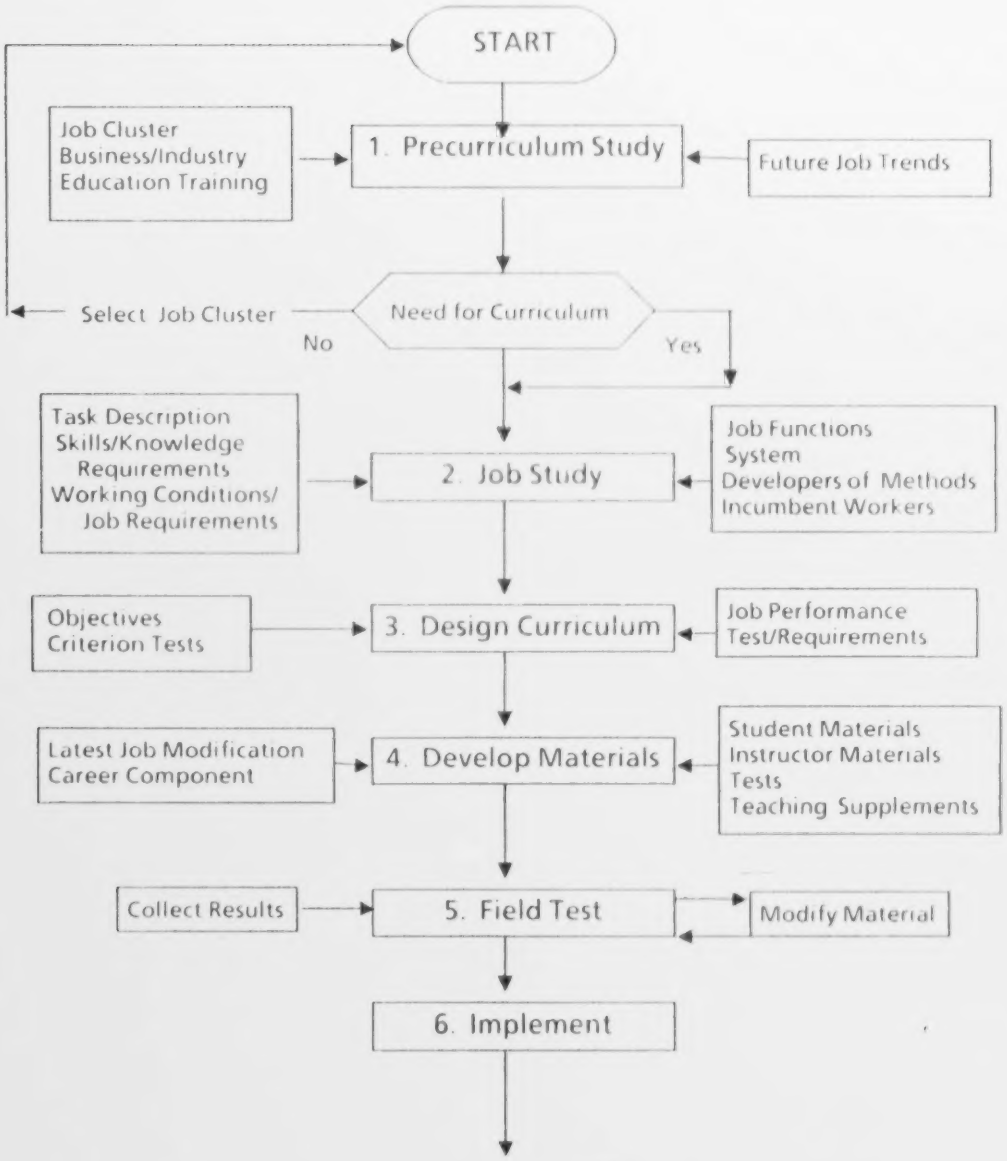
Step 5 Field Test

The field test of curriculum materials closely simulates the actual instructional program and job environment. The purpose of the field test is to evaluate the effectiveness of the entire system including materials, guides, logistics and management.

Due to the variety of vocational training programs, there can be no one set guideline for implementing the curriculum in all settings. The field test provides the information that enables the instructor to use the curriculum materials more effectively. This information explains to the user how the system functions, what specifically it teaches, how effective and efficient it is, and how it can best be implemented.

Upon completion of the field testing, materials in the curriculum packet are refined to the point where they can be introduced for general use.

Curriculum Development System



Step 6 Implement

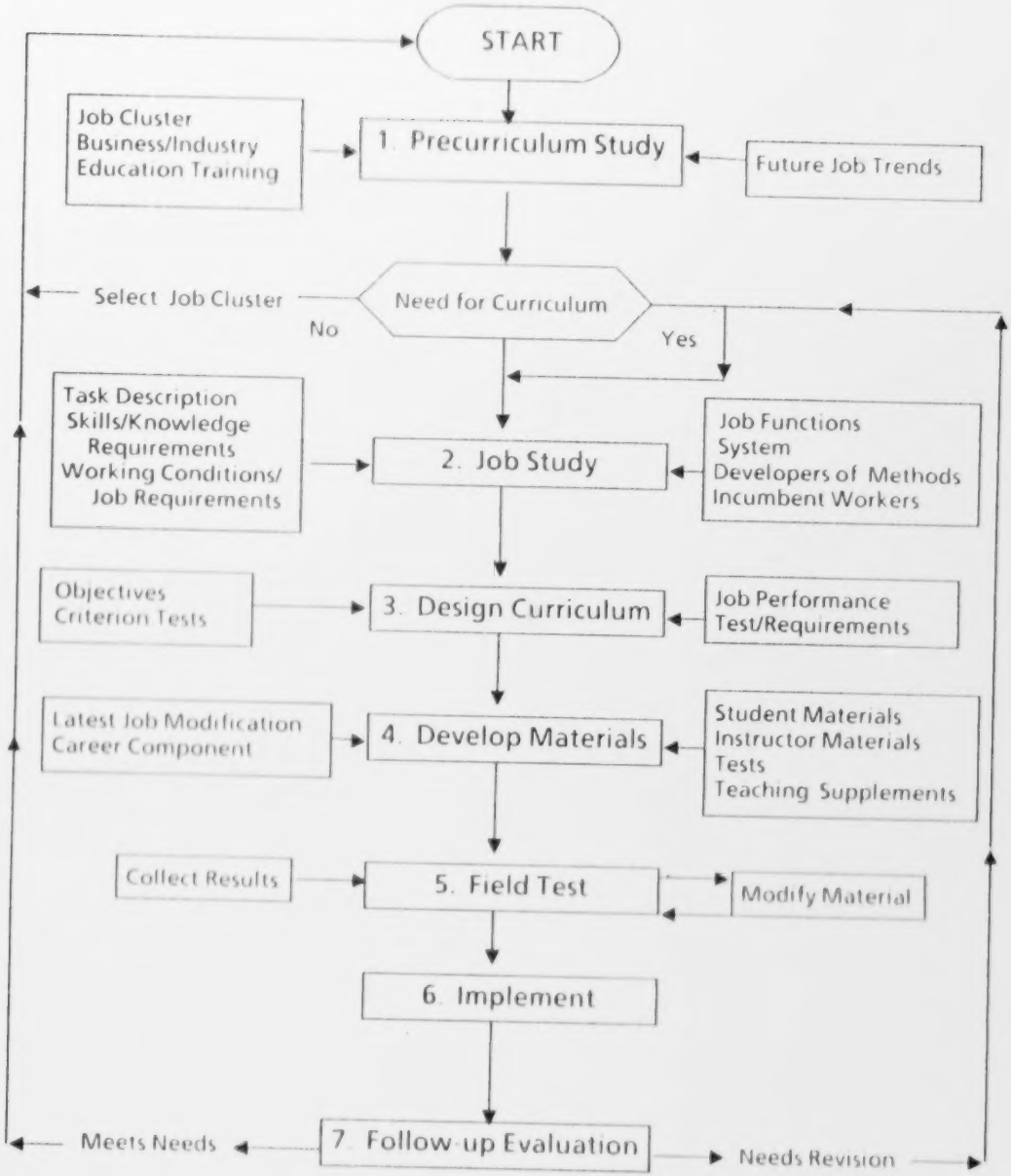
Implementing the curriculum packet in the learning environment determines its effectiveness. During this phase, feedback should be continuous so that the packet can be modified to meet the local situation. The curriculum packet is never a finished product due to the ever-changing needs of the individual learners and of the work force.

Two groups of people have significant roles for implementing the curriculum packet: the developer of the curriculum and the instructors using the packet.

The developer of the curriculum packet should provide in-service training to interested parties. The in-service would assist in adapting the packet to the local classroom situation.

The faculty must be encouraged to constantly improve the performance of the instructional process. Unless faculty are involved in the process, it is difficult to have an effective training or instructional system.

Curriculum Development System



All curriculum has the potential to become mismatched with job requirements. This happens because requirements change and community/business needs differ. An inadequate system for curriculum development increases the likelihood of a mismatch.

The follow-up evaluation addresses whether the needs identified in the precurriculum study have been met and the education/training content matches the current job. Program completers are a source to determine if the content learned and objectives identified were relevant and valid for them.

Evaluation data are often the basis for judging the value of continuing with the current curriculum, revising it, or dropping it.

For vocational education to be an instructional system capable of providing a predictable product, the instructors and administrators must integrate regular follow-up studies as part of their own job responsibilites.

By using feedback from those who have completed the program and are employed and from their employers, vocational education curriculum remains relevant and meaningful.

East Central

Sangamon State University , F-2
Springfield, IL 62794-9243
217/786-6375 • AVO1727

Rebecca Douglass, Director

Delaware
Rachel J. Williams
Dept. of Public Instruction
J.G. Townsend Bldg
Dover, DE 19901
302/736-4681 -- AVO0976

District of Columbia
Esther Hamilton
Browne Administrative Unit
26th St. & Benning Rd , N E
Washington, D C 20002
202/724-2416

Illinois
Peggy Pool
State Board of Education
100 N. 1st St
Springfield, IL 62777
217/782-4620 -- AVO1726

Indiana
James Pershing
Vocational Education Services
Indiana University
840 State Rd. 46 Bypass, Room 110
Bloomington, IN 47405
812/335-6711 -- AVO1851

Maryland
Rose Mary Bengel
Dept. of Education
200 W. Baltimore St., 3rd Fl.
Baltimore, MD 21201
301/333-2566 -- AVO2601

Michigan
Mary Brown
Dept. of Education
P O. Box 30009
Lansing, MI 48909
517/373-0346 -- AVO2852

Minnesota
Deena Allen
Instructional Services Section
Department of Education
550 Cedar St
St. Paul, MN 55101
612/296-0668 -- AVO2979

Ohio
Joyce Keefer Leimbach
Instructional Materials Lab
1900 Kenny Rd
Columbus, OH 43210-1016
614/292-5001 -- AVO4476

Pennsylvania
Evelyn Werner
PDE Resource Center
333 Market St. P O. Box 911
Harrisburg, PA 17126-0333
717/783-9539 -- AVO4851

Virginia
Kay Brown
Dept. of Education
P O. Box 6Q
Richmond, VA 23216
804/225-2709 -- AVO5854

West Virginia
John Riddle
Vocational Curriculum Laboratory
Cedar Lakes Conference Center
Ripley, WV 25271
304/372-7017 -- AVO6103

Wisconsin
Lou Chinnaswamy
VTAE, P O. Box 7874
310 Price Place
Madison, WI 53707-7874
608/266-2222 -- AVO6226

Midwest

Dept. of Vocational and Technical Education
1500 W. 7th Ave.
Stillwater, OK 74074-4364
405/377-2000, Ext. 247
AVO4602

Richard Makin, Director

Arkansas
Jim Adams
Vocational Division
3 Capitol Mall
Education Building, West
Little Rock, AR 72201-1083
501/682-1482
AVO 0476

Iowa
Jan Huss
Bureau of Career Education
Grimes State Office Bldg
Des Moines, IA 50319-0146
515/281-4704
AVO1976

Kansas
Carol Fagen
Dept. of Education
120 E. 10th St
Topeka, KS 66612
913/296-2221
AVO2102

Louisiana
David Poston
Vocational and Curriculum Development and Research Center
210 Highway 3110, South Bypass
Natchitoches, LA 71458-1159
318/357-3155
AVO2352

Missouri
Harley Schlichting
University of Missouri
10 London Hall
Columbia, MO 65211
314/882-2884
AVO3226

Nebraska
Ann Masters
Dept. of Education
301 Centennial Mall, South
Box 94987
Lincoln, NE 68509
402/471-4816
AVO3476

New Mexico
Darrell Jones
Dept. of Education
Education Bldg
Santa Fe, NM 87501-2786
505/827-6646
AVO3976

Oklahoma
Greg Pierce
Dept. of Vocational and Technical Education
1500 W. 7th Ave
Stillwater, OK 74074-4364
405/377-2000
AVO 4602

Texas
Sylvia Clark
Texas Education Agency
1701 N. Congress Ave
Austin, TX 78701
512/463-9443

Northeast

New Jersey Department of Education
Division of Voc Ed
Crest Way
Aberdeen, NJ 07747
201/290-1900
AVO3854

Martha Pocsi, Director

Connecticut
Joan Briggaman
Dept. of Education
25 Industrial Park Rd.
Middletown, CT 06459
203/638-4112
AVO0851

Maine
Roseanne Schacht
Dept. of Education
Station 23
Augusta, ME 04333
207/289-5854
AVO2476

Massachusetts
John McDonagh
Dept. of Education
1385 Hancock St.
Quincy, MA 02169
617/770-7380
AVO2726

New Hampshire
Richard Monteith
Dept. of Education
101 Pleasant St.
State Office Park, South
Concord, NH 03301
603/271-3186

New Jersey
Doris L. Dopkin
Division of Voc Ed
Dept. of Education
225 W. State St., CN500
Trenton, NJ 08625
609/292-5622
AVO3855

New York
Richard Jones
Dept. of Education
Room 1623
1 Commerce Plaza
Albany, NY 12234
518/474-4806
AVO4106

Puerto Rico
Dolores Figueroa
Dept. of Education
Box 759
Hato Rey, PR 00919
809/758-4949

Rhode Island
Jackie Harrington
Dept. of Education
22 Hayes St.
Providence, RI 02908
401/277-2705
AVO4976

Vermont
Moire Coleman
Dept. of Education
State Office Building
120 State St.
Montpelier, VT 05602
802/828-3101
AVO5728

Virgin Islands
Irvin Sewer
Dept. of Education
P.O. Box 6640
Charlotte Amalie, VI 00801
809/774-3366

Northwest

Old Main -- Room 478
Saint Martin's College
Lacey, WA 98503
206/438-4456
AVO5976

Bill Daniels, Director

Alaska
Verdell Jackson
Vocational Education
Pouch F - Gold Belt Place
Juneau, AK 99811
907/465-2980
AVO0226

Colorado
Donna Brookhart
Division of Occupational Education
1391 Speer Blvd , Suite 600
Denver, CO 80204
303/620-4080
AVO0726

Idaho
Don Eshelby
Division of Vocational Education
650 W State St
Boise, ID 83720
208/334-3871
AVO1601

Montana
Gus Korb
Center for Voc Ed
Northern Montana University
Havre, MT 59501
406/265-3738

North Dakota
Ron Mehrer
State Board for Vocational Education
15th Floor, Capitol Tower
Bismarck, ND 58505
701/224-3195
AVO4351

Oregon
Wanda Monthey
Dept of Education
700 Pringle Parkway SE
Salem, OR 97310-0290
503/378-2954
AVO4726

South Dakota
Larry Nelson
Division of Vocational Education
Richard F Kneip Bldg
Pierre, SD 57501
605/773-3423
AVO5226

Utah
Joe Luke
State Office of Education
250 E 500 South
Salt Lake City, UT 84111
801/533-4088
AVO5601

Washington
Walter S Wong
Commission for Voc Ed
Building 17
Airdustrial Park LS-10
Olympia, WA 98504
206/753-5676
AVO5980

Wyoming
Gayle Lain
Dept of Education
Hathaway Bldg
Cheyenne, WY 82002-0050
307/777-7415
AVO6352

Southeast

Research & Curriculum Unit
P.O. Drawer DX
Mississippi State, MS 39762
601/325-2510
AVO3101

Rebecca Love Wilkes, Director

Alabama
James Kendrick
Division of Vocational Education
State Office Building, Room 802
Montgomery, AL 36130
205/261-5225
AVO0101

Florida
David McOuat
Vocational Division
Dept. of Education
Knott Bldg.
Tallahassee, FL 32301
904/488-3192
AVO1226

Georgia
Sharon Norman
Office of Vocational Education
1766 Twin Towers East
205 Butler St.
Atlanta, GA 30334-5040
404/656-4059
AVO1355

Kentucky
John Horton
Office of Vocational Education
2024 Capitol Plaza Tower
Frankfort, KY 40601
502/564-2890
AVO2226

Mississippi
Don Christensen
P.O. Drawer DX
Mississippi State University
Mississippi State, MS 39762
601/325-2510
AVO3101

North Carolina
Meg Murphy
Dept. of Public Instruction
Room 534, Educational Bldg.
Raleigh, NC 27603-1712
919/733-7094
AVO4226

South Carolina
Robert T. Benson
Vocational Curriculum Development
1237 Gadsden St.
Columbia, SC 29201
803/737-2744
AVO5101

Tennessee
Lynn Cohen
Department of Education
200 Cordell Hull
Nashville, TN 37219-5839
615/741-1819
AVO5352